

layer. Use one to two inches of livestock manure, or a nitrogen fertilizer such as ammonium nitrate or ammonium sulfate at a rate of one third of a cup for every twenty five square feet of surface area. If these nitrogen sources are not available, one cup of 10-10-10 fertilizer per 25 square feet of surface area will also suffice. Do not use fertilizer that contains herbicide or pesticide.

About a one inch layer of soil or completed compost can be applied on top of the fertilizer layer. One purpose of adding soil is to ensure that the pile is inoculated with decomposing microbes. The use of soil in a compost pile should be considered optional. In most cases, organic yards wastes such as grass clippings or leaves contain enough microorganisms on the surface to effect decomposition. Studies have shown that there is no advantage in purchasing a compost starter or inoculum. One way to insure that activator microbes are present in the new compost is to mix in some old compost as the pile is prepared.

Most compost piles should initially be prepared in layers. This will facilitate decomposition by insuring proper mixing. Each pile ideally should be about 5 feet high. If only tree leaves are to be composted, layering may not be necessary. Fallen leaves can be added as they are collected. Leaves should be moistened if they are dry and since dead leaves lack adequate nitrogen for rapid decomposition, addition of a high-nitrogen fertilizer (10-30% analysis) should be added to speed up breakdown. Approximately 5 ounces (about 1/2 cup) of 10% nitrogen fertilizer should be added for each 20 gallons of hand compressed leaves.

To prevent odors and hasten decomposition, the pile must be turned occasionally. Turning also exposes seeds, insect larvae, and pathogens to lethal temperatures inside the pile. Odors may arise either from the addition of excessive amounts of wet plant materials like fruits or grass clippings, or from overwatering. A properly mixed and adequately turned compost heap will not have objectionable odors. An actively decomposing pile will reach temperatures of 130-160°F in the middle.

Reasons for the pile not heating up may be due to: too small a pile, not enough nitrogen, lack of oxygen, too much or not enough moisture. The pile should be turned when the temperature in the center begins to cool. This will introduce oxygen and undecomposed material into the center and subsequently regenerate heating. The composting process is essentially complete when mixing no longer produces heat in the pile.

Generally, a well managed compost pile with shredded material under warm conditions will be ready in about 2-4 months. A pile left unattended and material not shredded may take over a year to decompose. Piles prepared in the late fall will not be ready for use the following spring. When the compost is finished, the pile will be about half its original size and have an earthy smell to it.

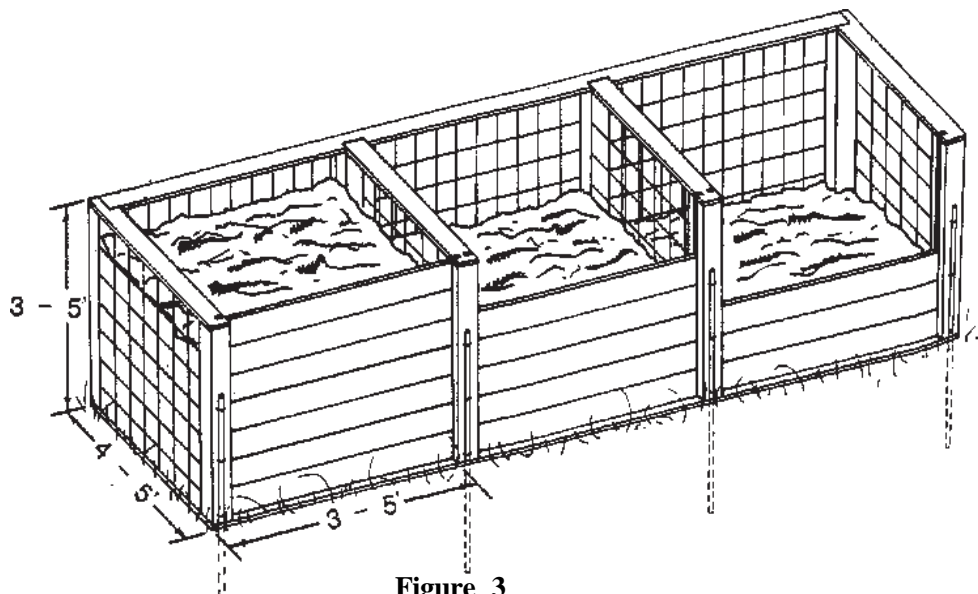


Figure 3